

Preliminary Report on Supersonic Jet Modeling

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PRELIMINARY REPORT ON SUPERSONIC JET MODELING

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The accompanying figures show the problem setup and radiation temperature (T_r) results for a simulation of a solid gold half-hohlraum irradiated with the 12 specified Omega laser beams using the incident pulse shape for shot 18080. The experimental package is not included in this modeling; the hohlraum has a solid gold wall at the experimental package position.

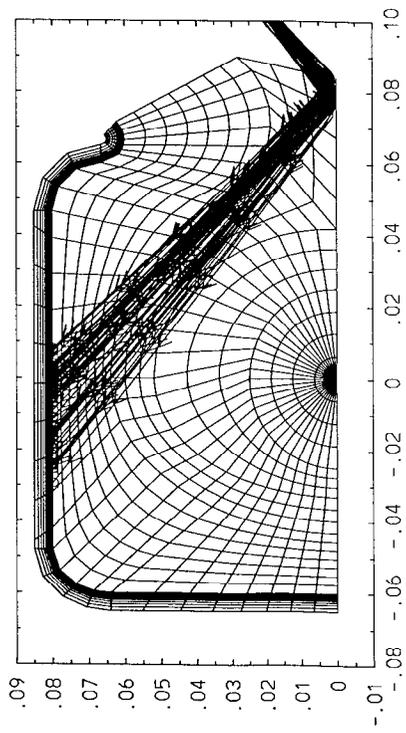
Figure-1 shows the initial zoning and focusing of the two sets of laser beams.

Figure 2 identifies the 4 regions over which we track the T_r as the simulation proceeds

Figures 3a-3d are plots of T_r in keV versus time in ns for the regions specified in Figure 2.

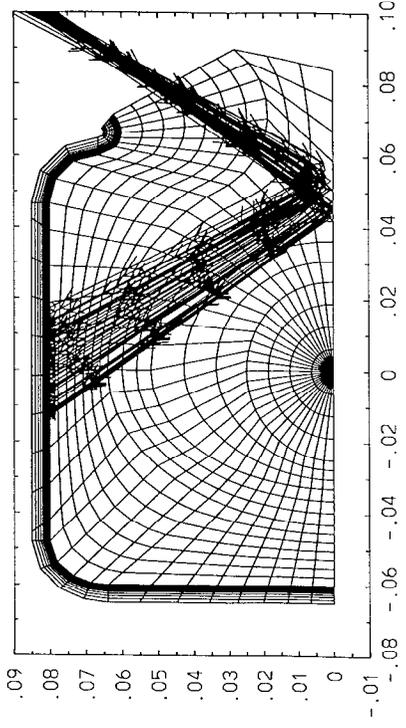
Figure 4 is a plot of T_r in keV versus time in ns. This T_r is computed from the emitted radiation flux using the original size of the laser entrance hole.

```
hh0269 1 1.000000E-06 dtv( 27, 19)= 1.00000E-06  
laser source 1: 2/12 beams
```



```
plotm  
plotr 1
```

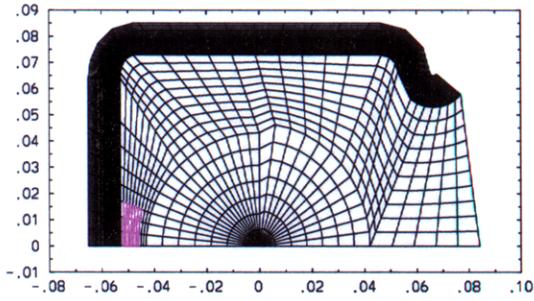
```
hh0269 1 1.000000E-06 dtv( 27, 19)= 1.00000E-06  
laser source 2: 10/12 beams
```



```
plotm  
plotr 2
```

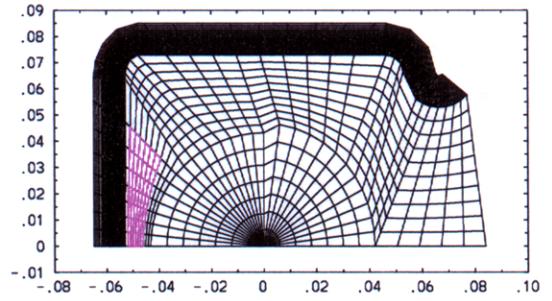
Figure 2

hh0269; region 1



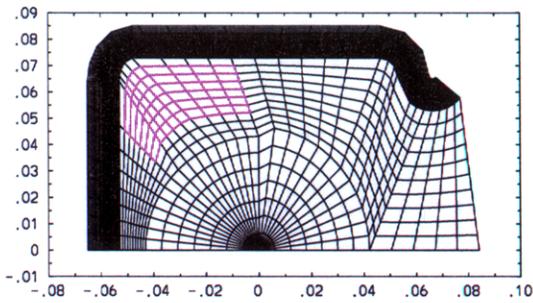
```
plotm
plotm krange=kfds1(1),kfds2(1) lrange=lfd1(1),lfd2(1) color=magenta thick=3
```

hh0269; region 2



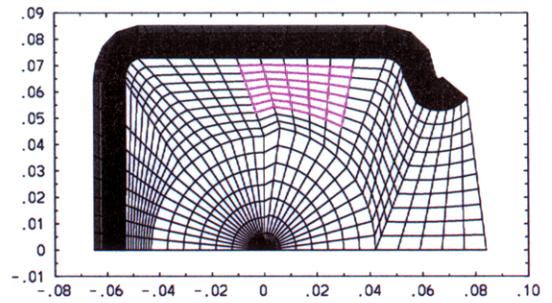
```
plotm
plotm krange=kfds1(2),kfds2(2) lrange=lfd1(2),lfd2(2) color=magenta thick=3
```

hh0269; region 3



```
plotm
plotm krange=kfds1(3),kfds2(3) lrange=lfd1(3),lfd2(3) color=magenta thick=3
```

hh0269; region 4



```
plotm
plotm krange=kfds1(4),kfds2(4) lrange=lfd1(4),lfd2(4) color=magenta thick=3
```

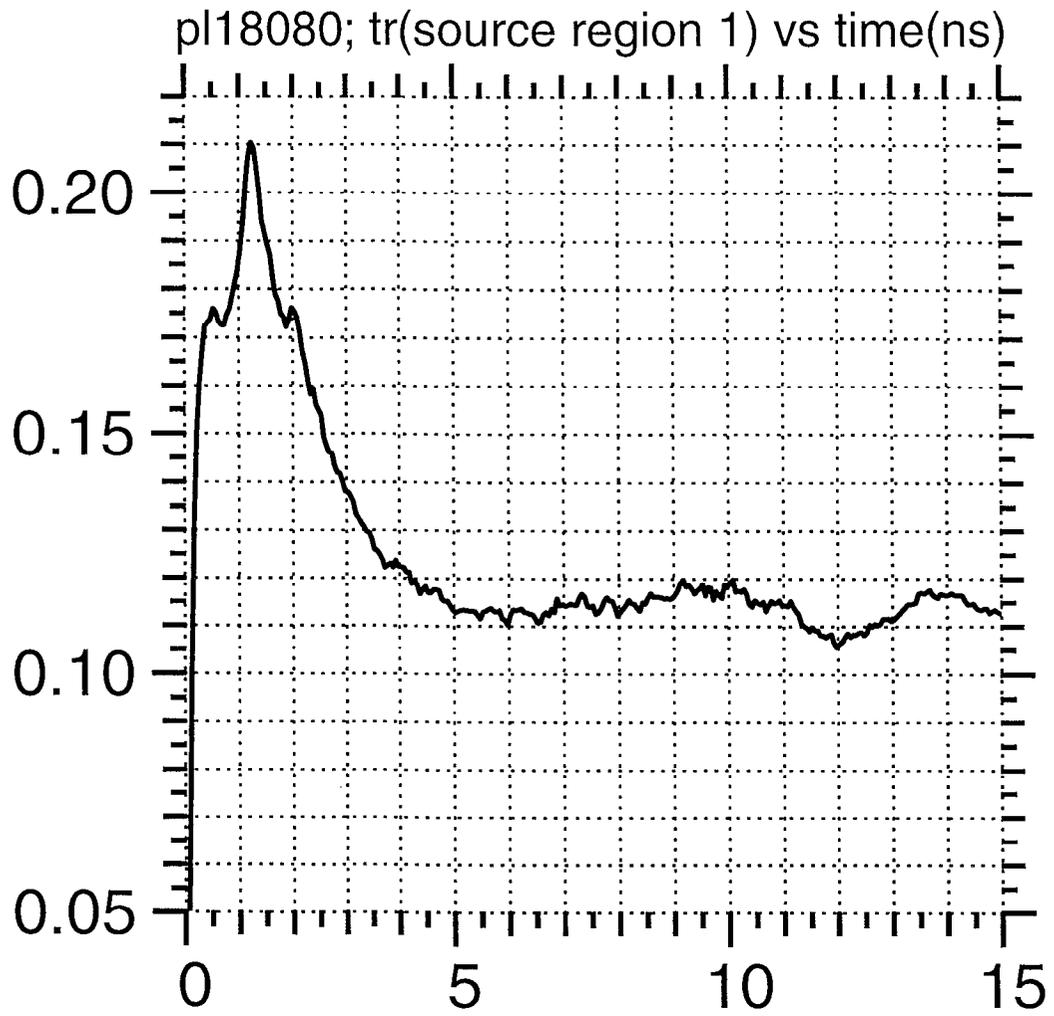
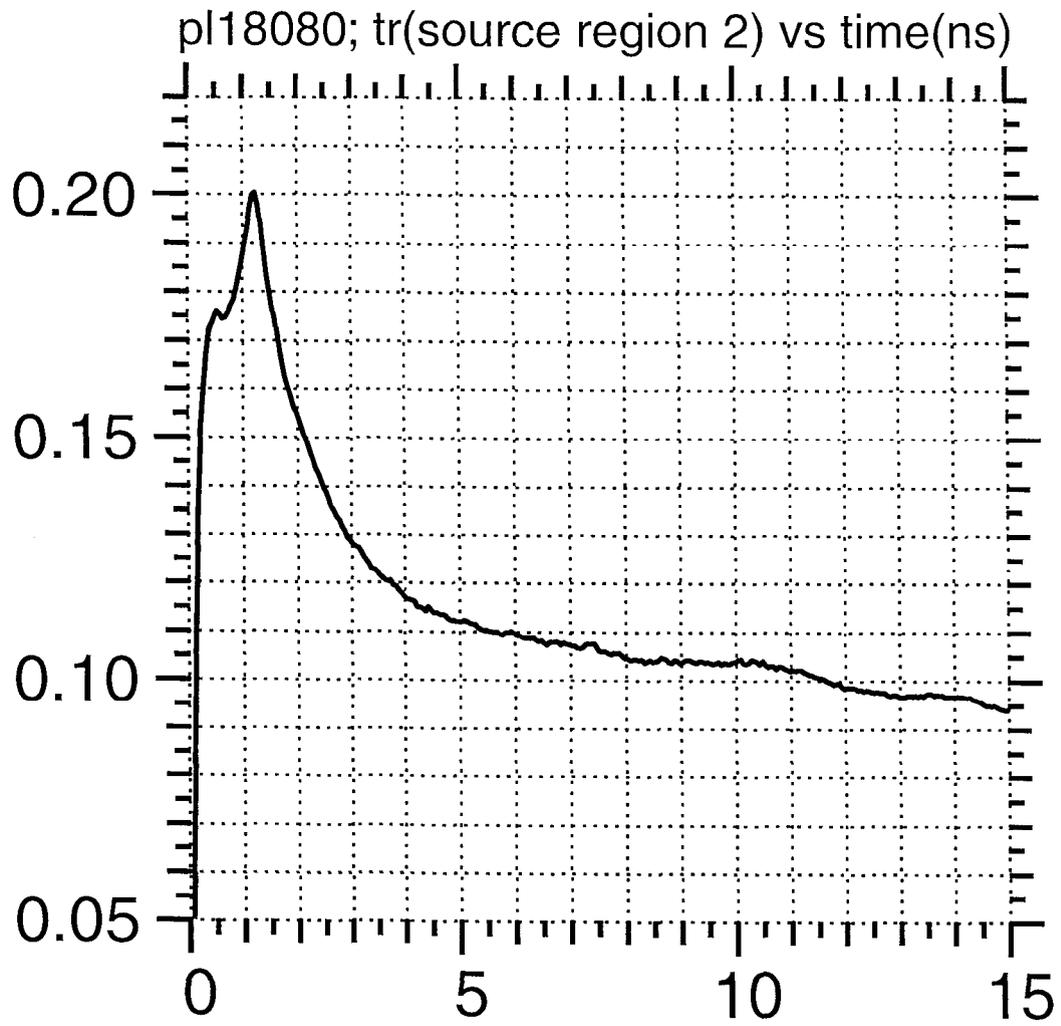
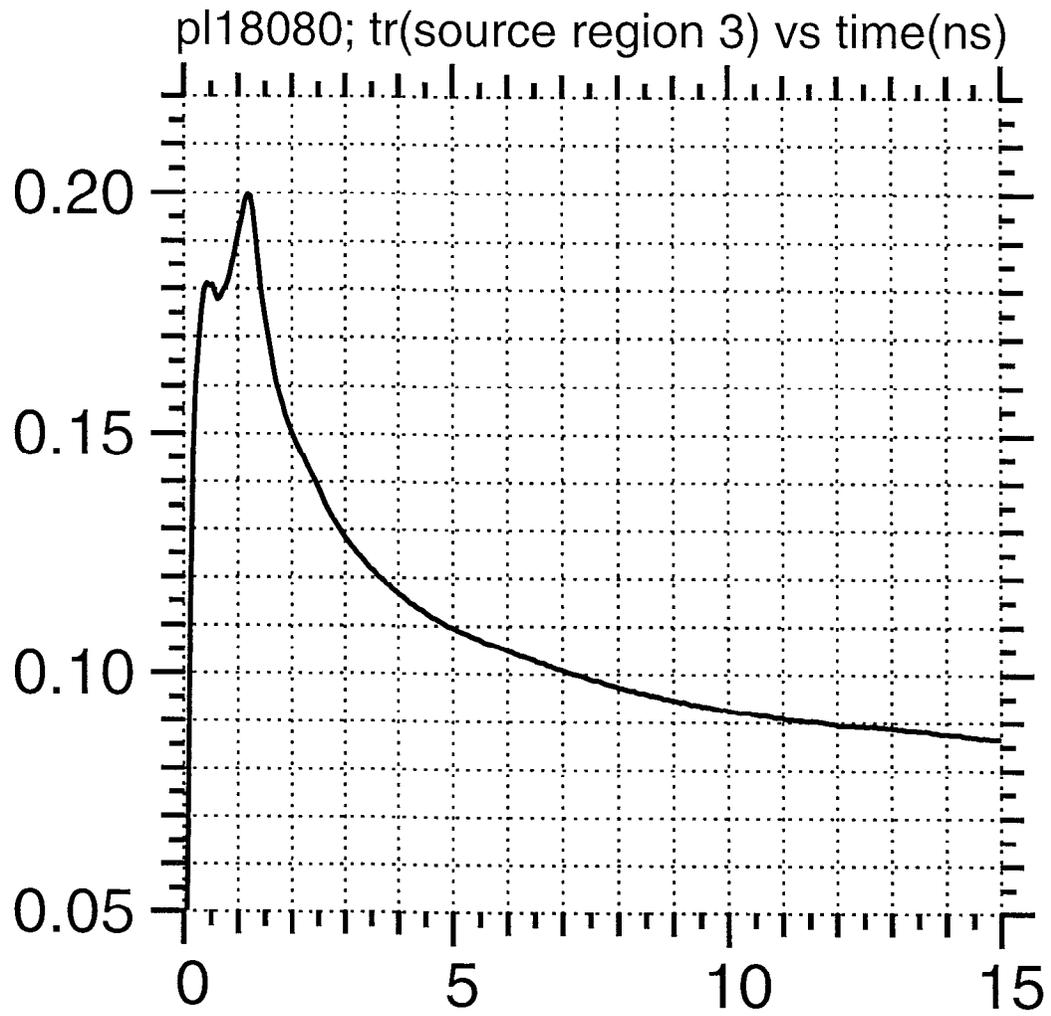
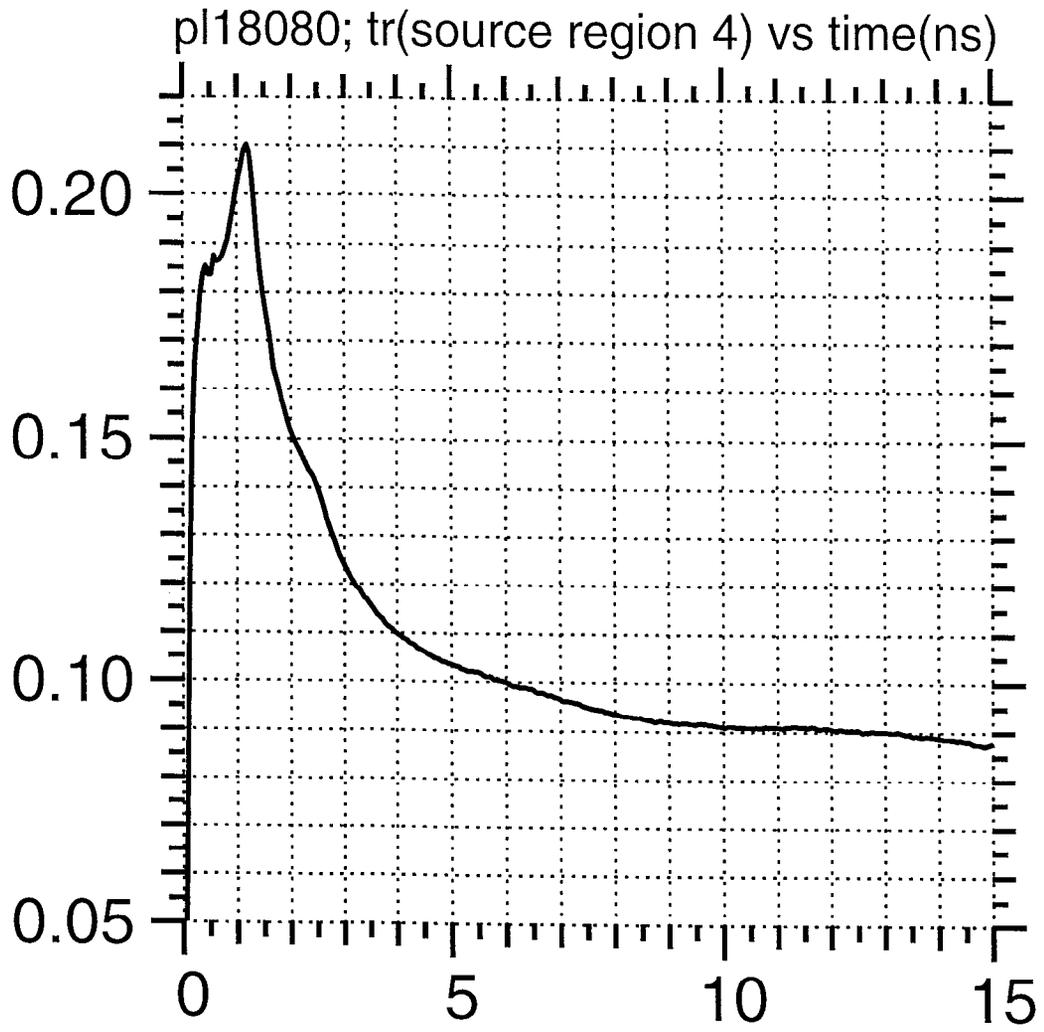


Figure 3a







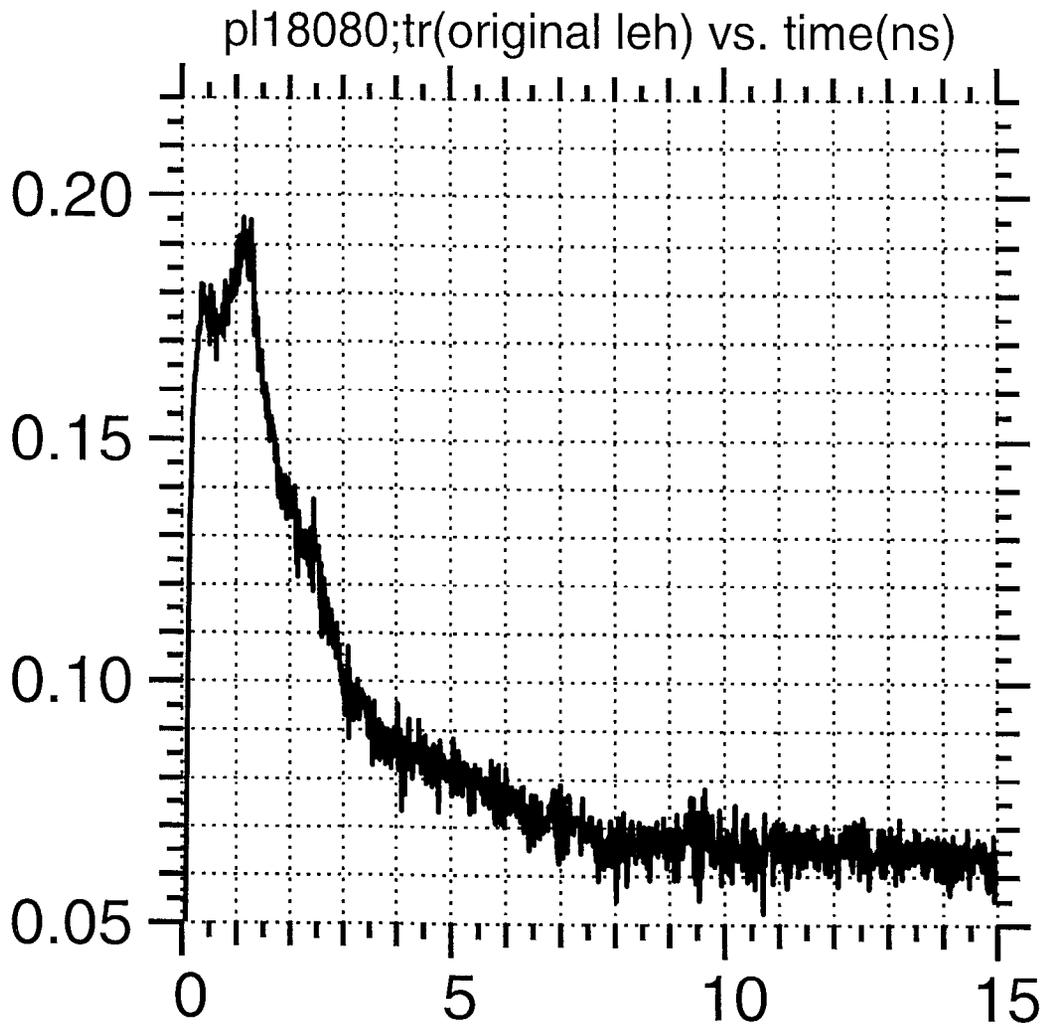


Figure 4